

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

CASE NUMBER: 06-20185
HON. VICTORIA A. ROBERTS

v.

D-2 MARCUS LAMONT FREEMAN
D-6 CHRISTOPHER BRANDON SCOTT,

Defendants.

ORDER

I. INTRODUCTION

Defendants Marcus Freeman (“Freeman”) and Christopher Scott (“Scott”) filed a joint motion to exclude expert testimony regarding certain cell site location information or in the alternative a *Daubert* hearing.

The Motion is **DENIED**.

II. BACKGROUND

Freeman and Scott are charged in a second superceding indictment with Conspiracy to Use Interstate Commerce Facilities in the Commission of a Murder for Hire in violation of 18 U.S.C. § 1958. Freeman is separately charged with Obstruction of Justice by Retaliating Against a Witness under 18 U.S.C. § 1513(b)(1). These charges stem from the murder of Leonard Day (“Day”). In short, while in Ohio, Day allegedly stole a large amount of money and jewelry from Co-Defendant Roy West (“West”) and

fled to Detroit. West allegedly enlisted others, including Freeman and Scott, to find Day and kill him. Day was later murdered in Detroit.

Freeman and Scott were previously tried for these offenses. Scott has been tried twice: the first trial ended in a hung jury and the second trial resulted in a conviction that was later vacated. Freeman was tried and convicted; however, his conviction was vacated on appeal.

The Government plans to call FBI Special Agent Christopher Hess ("Agent Hess") to testify about the general location of a cell phone ("target phone") allegedly used by the Defendants.

During previous trials, Hess testified that certain phone calls made or received by the target phone on December 17, 2005 through December 20, 2005, the day of Day's killing, were made and received while the phone was in the vicinity of the scene of Day's killing. Hess based this testimony on the target phone call detail records from Nextel and GPS location data from Nextel cell sites.

In particular, Hess testified that from December 17, 2005, to December 20, 2005, the target phone signaled more than 30 times off the northeast sector of Nextel cellular tower 125004182 ("Tower 4182"). Hess estimated that the coverage range of a urban cell site like Tower 4182 was 1.5 - 2 miles, spreading out to the northeast of the tower in an approximate 120 degree pie shape pattern. Hess measured the direction and distance from the scene of Day's killing to Tower 4182, which was one mile northeast, and determined the murder scene was within the proposed coverage range of Tower 4182.

Hess based this testimony on the target phone call detail records from Nextel

and GPS location data from Nextel cell sites. Hess did not use propagation reports or engineering surveys to estimate the coverage areas. However, Hess did visit Tower 4182's location and look for manmade and topographical features that could interfere with the tower's signal.

Defendants seek to exclude Agent Hess' testimony. They say it is unreliable and irrelevant. Specifically, Defendants challenge Agent Hess' opinion that Tower 4182's coverage can be estimated within a 120 degree pie shaped arc extending 1.5 to 2 miles from the tower. Defendants say Hess did not use propagation maps that depict the tower's coverage or conduct a geographic survey of the coverage area. Defendants also say Hess did not take into account factors that impact the coverage range of a cell tower.

The Government disagrees. It says Agent Hess used a common methodology and reliable principles.

III. STANDARD OF REVIEW

Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) guide a court's determination of the admissibility of expert testimony. Rule 702 says:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. Under *Daubert*, the trial court acts as a "gatekeeper" and ensures

that any and all scientific testimony or evidence admitted is not only relevant, but reliable. *Daubert*, 509 U.S. at 597. The proponent of the expert opinion, in this case the Government, bears the burden to establish its admissibility by a preponderance of evidence. *Nelson v. Tennessee Gas Pipeline Co.*, 243 F.3d 244, 251 (6th Cir. 2001) (citing *Daubert*, 509 U.S. at 592, n.10).

To evaluate reliability, a court must focus on the methodology and principles that form the basis for the testimony. *Greenwell v. Boatwright*, 184 F.3d 492, 497 (6th Cir. 1999). *Daubert* sets forth four factors to assist trial courts in evaluating the admissibility of expert testimony:

- (1) whether a theory or technique has been or can be tested;
- (2) whether the technique has been subjected to peer review and publication;
- (3) the known or potential rate of error; and
- (4) whether the technique has been accepted by the 'relevant scientific community,' or 'has been able to attract only minimal support within the community.'

Daubert, 509 U.S. at 593-94; *Gross v. Comm'r of Internal Rev.*, 272 F.3d 333, 339 (6th Cir. 2001);

"The test of reliability is 'flexible,' and *Daubert's* list of specific factors neither necessarily nor exclusively applies to all experts or in every case. Rather, the law grants a district court the same broad latitude when it decides how to determine reliability as it enjoys in respect to its ultimate reliability determination." *Kumho Tire. Co. v. Carmichael*, 526 U.S. 137, 141-42 (1999). "[T]he factors it mentions do not constitute a 'definitive checklist or test'; they 'may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject

of his testimony.” *Daubert*, 509 U.S. at 151; *Kumho*, 526 U.S. at 150. “*Daubert's* general holding . . . applies not only to testimony based on ‘scientific’ knowledge, but also to testimony based on ‘technical’ and ‘other specialized’ knowledge.” *Kumho*, 526 U.S. at 141.

In addition to reliability, the court must evaluate whether the testimony is relevant. The relevance inquiry ensures “that there is a ‘fit’ between the testimony and the issue to be resolved by the trial.” *Greenwell v. Boatwright*, 184 F.3d 492, 496 (6th Cir. 1999) (citing *United States v. Bonds*, 12 F.3d 540, 555 (6th Cir. 1993)). Expert testimony is relevant if it assists the trier of fact in understanding the evidence or determining a material fact in question. *Daubert*, 509 U.S. at 592-93.

When evaluating expert testimony, “[t]he focus . . . must be solely on principles and methodology, not on the conclusions that they generate.” *Daubert*, 509 U.S. at 595. “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Daubert*, 509 U.S. at 596 (citation omitted). However,

[C]onclusions and methodology are not entirely distinct from one another. Trained experts commonly extrapolate from existing data. But nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.

General Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997).

A court must always keep in mind that even if it finds the evidence reliable and relevant, it must also determine “whether its probative value is outweighed by its prejudicial effect” under Fed. R. Evid. 403. *Flanagan*, 423 F. Supp. 2d at 699 (citing

Daubert, 509 U.S. at 595).

IV. DISCUSSION

A. Agent Hess's Testimony Is Reliable

Defendants have three concerns regarding the reliability of Agent Hess' testimony. They say Agent Hess' testimony is unreliable because he: (1) did not use propagation maps; (2) estimated Tower 4182's coverage area in a 120 degree pie shape arc extending 2 miles; and (3) failed to take into account factors affecting the tower's coverage range.

1. Use of Propagation Maps

Defendants contend Agent Hess' testimony is unreliable because he did not use propagation maps or conduct a geographic survey when creating his coverage maps.

The Court is not aware of any other court that has required an expert to use propagation maps or conduct geographic surveys to support his conclusion. In many instances, courts admit expert testimony based on data and sources similar to what Agent Hess relied upon: cellular transmission records which specify the cell towers with which the target phone connected, and records that identified the coordinates and sector of the towers.

For instance, in *United States v. Eady*, No. 2:12-CR-00415-DCN-3, 2013 WL 4680527, at *4 (D.S.C. Aug. 30, 2013), the expert relied on records specifying the cell tower and sector the cell phone connected to, including "the location of their cell towers, with GPS coordinates for each tower, and the specifications for each of the sectors of the towers." Similarly, in *United States v. Machado Erazo*, 950 F. Supp. 2d 49, 55

(D.D.C. 2013), the agent relied on call data from the service provider that identified which specific network tower and which antenna on that tower to which a call connected, and from that data the agent created coverage maps.

The fact that Agent Hess did not rely specifically on propagation maps does not make his analysis or methodology unreliable. While propagation maps are a reliable source to create coverage maps, they are not the only source available to law enforcement. Thus, Agent Hess' failure to use propagation maps or conduct a geographic survey does not render his data unreliable.

Moreover, any shortcomings in the materials Agent Hess used are compensated by his experience conducting cell site analysis. Agent Hess has testified as an expert using historical cell site data in over 25 trials, he is one of the ten founding members of the FBI's Cellular Analysis Survey Team, and he spends most of his time analyzing historical cell site data. See, *United States v. Mack*, No. 3:13-CR-00054 MPS, 2014 WL 6474329, at *4 (D. Conn. Nov. 19, 2014) (examining agents experience in determining reliability and noting "the foundation for an expert's testimony may be based on experience alone."). Thus, Agent Hess' experience combined with his sources indicates that his testimony is reliable.

2. Depiction of Coverage Area

Defendants disagree with Agent Hess' opinion that Tower 4182's coverage area can be estimated to be within a 120 degree pie shaped arc and Agent Hess' estimate that the outer edge of the pie is 1.5 to 2 miles from the tower.

This is not a reason to exclude Hess' testimony. Dividing the coverage area of a tower into 120 degree pie shaped segments appears common. See, *United States v.*

Machado Erazo, 950 F. Supp. 2d 49, 55 56 (D.D.C. 2013); *United States v. Eady*, 2013 WL 4680527, at *4 (D.S.C. Aug. 30, 2013); *United States v. Jones*, 918 F. Supp. 2d 1, 3 (D.D.C. 2013). And, Agent Hess' two mile coverage estimate is consistent with other expert testimony. See, *United States v. Davis*, No. 11-60285-CR, 2013 WL 2156659, at *5 (S.D. Fla. May 17, 2013) (admitting expert testimony despite defendant's contention that the agent "presented no scientific calculations that he specifically used for his conclusion that the radius of the 'fields of energy' for each tower *is only two miles.*") (emphasis added). In fact, his estimate is consistent with a coverage estimate in Defendants' own exhibit. See, Doc. # 822 Ex. 1 pg 2. ("[t]he actual practical range [of coverage] is. . . less than 5 km [3.10686 miles] in urban locations and less than 2 km [1.24274 miles] in city [center] environments.").

Since Agent Hess' testimony is common and consistent with other expert testimony, the Court will not exclude it.

Importantly, Defendants' contentions about the 120 degree pie shape and Agent Hess' ability to accurately estimate the tower's coverage distance are really a disagreement with his conclusions, not his methodology. As *Daubert* explains, "[t]he focus . . . must be solely on principles and methodology, not on the conclusions that they generate." *Daubert*, 509 U.S. at 595. The proper method to attack the conclusions of an expert is through cross-examination or the presentation of another expert. At trial, Defendants will have the opportunity to do both.

3. Impact of Other Factors

Defendants' final challenge goes to the weight of Agent Hess' testimony rather

than admissibility. Defendants say Hess' testimony is unreliable because it does not take into account factors which impact the coverage range of a cell tower, such as the tower's wattage, height, structural obstructions and weather conditions.

The fact that an expert did not take into account various factors that may affect the signal strength of a tower or impact its coverage range does not render "the fundamental methodology of cell site analysis unreliable." *United States v. Jones*, 918 F. Supp. 2d 1, 5 (D.D.C. 2013). Instead, the absence of those considerations goes to the weight of the testimony rather than its admissibility, and those considerations can be addressed through vigorous cross-examination. *Id.* See also, *Mack*, 2014 WL 6474329, at *4 ("the fact that [the agent] was not able to use additional parameters, such as wattage, beam width, tower height, and down-tilt, may lower the precision of his estimate, but it does not make the estimate altogether unreliable."); *United States v. Allums*, No. 2:08-CR-30 TS, 2009 WL 806748, at *2 (D. Utah Mar. 24, 2009) ("these arguments, and others that might cast doubt on [Agent's] conclusions in this specific case, are legitimate questions that would be appropriately raised on cross-examination of [Agent], at trial.")

Defendants can address their concerns about Agent Hess' alleged failure to consider these factors through cross-examination; or, they can address the issue by presenting their own expert witness. The Government indicates it may call radio frequency engineer Joseph Smyk to testify about the factors Defendants say impact a tower's coverage areas. If he testifies, Defendants concerns would best be addressed through vigorous cross examination of Smyk.

B. Agent Hess' Testimony Is Relevant

Defendants say Hess' opinion is irrelevant because it is unreliable. Under Rule 401, "evidence is relevant if: (a) it has any tendency to make a fact more or less probable than it would be without the evidence; and (b) the fact is of consequence in determining the action." Fed. R. Evid. 401. Agent Hess' proposed expert testimony is that, during the relevant time leading up to Day's murder, call activity from the Target phone in possession of the Defendants place them in the general area where Day stayed and was later killed. This testimony is relevant because it makes a fact of consequence in determining the action – whether Defendants were physically present near the scene of the killing, around the time of the killing - more probable than it would be without the evidence. Accordingly, the Court finds that Agent Hess' testimony will help the trier of fact understand the evidence and determine a fact in issue.

C. The Court Will Not Hold a *Daubert* Hearing

District Courts are not obligated to hold a *Daubert* hearing; in fact, hearings are not necessary if the parties sufficiently brief the issue. *Clay v. Ford Motor Co.*, 215 F.3d 663, 667 (6th Cir. 2000); *United States v. Reynolds*, No. CRIM. 12-20843, 2013 WL 2480684, at *3 (E.D. Mich. June 10, 2013). Since the parties' briefs were sufficient, the Court declines to hold a *Daubert* hearing.

V. CONCLUSION

Defendants' Amended Joint Motion to Exclude Expert Testimony Regarding Certain Cell Site Location, or in the Alternative for a *Daubert* Hearing (Doc. # 822) is **DENIED**.

IT IS ORDERED.

S/Victoria A. Roberts

Victoria A. Roberts

United States District Judge

Dated: May 4, 2015

The undersigned certifies that a copy of this document was served on the attorneys of record by electronic means or U.S. Mail on May 4, 2015.

s/Linda Vertriest

Deputy Clerk